

■ ENVIRONMENT

TIGERS ON

Once considered a conservation success story, they are again sliding toward extinction. This time the world's nations may not be able to save the great cats.

By EUGENE LINDEN NAGARAHOLE

THE GREAT BEAST SEEMS TO MATERIALIZE out of the dusk—a striped vision of might and mystery. Emerging from a thicket in southern India's Nagarhole National Park, the Bengal tigress is hungry and ready to begin another night's hunt. To nourish her 500-lb. body, she must kill a sambar deer, a boar or some other big animal every week of her adult life. Fortunately for her, Nature has given tigers the prowess to prey upon creatures far larger than the cats are. Her massive shoulders and forelimbs can grip and bring down a gaur, a wild, oxlike

animal that may weigh more than a ton. Her powerful jaws and daggerlike teeth can rip the victim's throat or sever its spinal column, making quick work of the kill. But there will be no killing at this moment. After padding along a park road for a mere 100 yds., the tigress abruptly melts into the brush—here one instant, gone the next. Watching her disappear, Indian biologist Ullas Karanth of New York's Wildlife Conservation Society, breaks into a knowing smile. "When you see a tiger," he muses, "it is always like a dream."

All too soon, dreams may be the only place where tigers roam freely. Already the Nagarhole tigress is not free. If she hunts during the day, she may run into a carload of tourists, cameras clicking. At night, it

may be poachers, guns blazing. Once the rulers of their forest home, she and the park's 50 other tigers are now prisoners of human intruders. More than 6,000 Indians live inside the 250-sq.-mi. refuge. And crowding the borders are 250 villages teeming with tens of thousands more people who covet not only the animals that the cats need for food but also the tigers. Their pelts and body parts fetch princely prices on the black market. Were it not for the 250 guards on patrol to protect Nagarhole's tigers, none of them would survive for long.

Sadly, this precarious life is as good as it gets for tigers today. Outside protected areas, Asia's giant cats are a vanishing breed, disappearing faster than any other large mammal with the possible exception of the rhinoceros. Even inside the parks, the tigers are succumbing to poaching and the relentless pressure of human population growth. No more than 5,000 to 7,500 of the majestic carnivores remain on the planet—a population decline of roughly

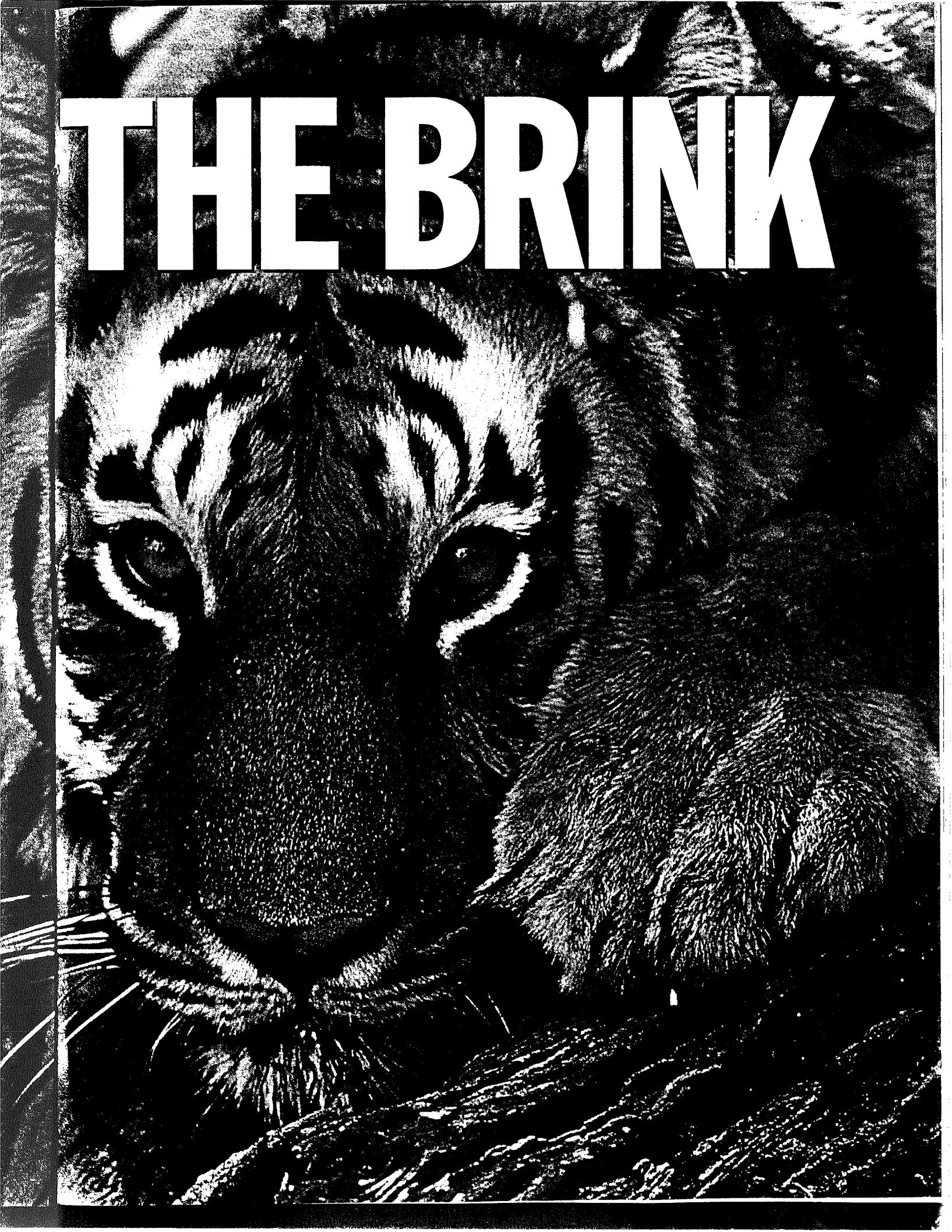
RON ORDER—EARTH ISLAND

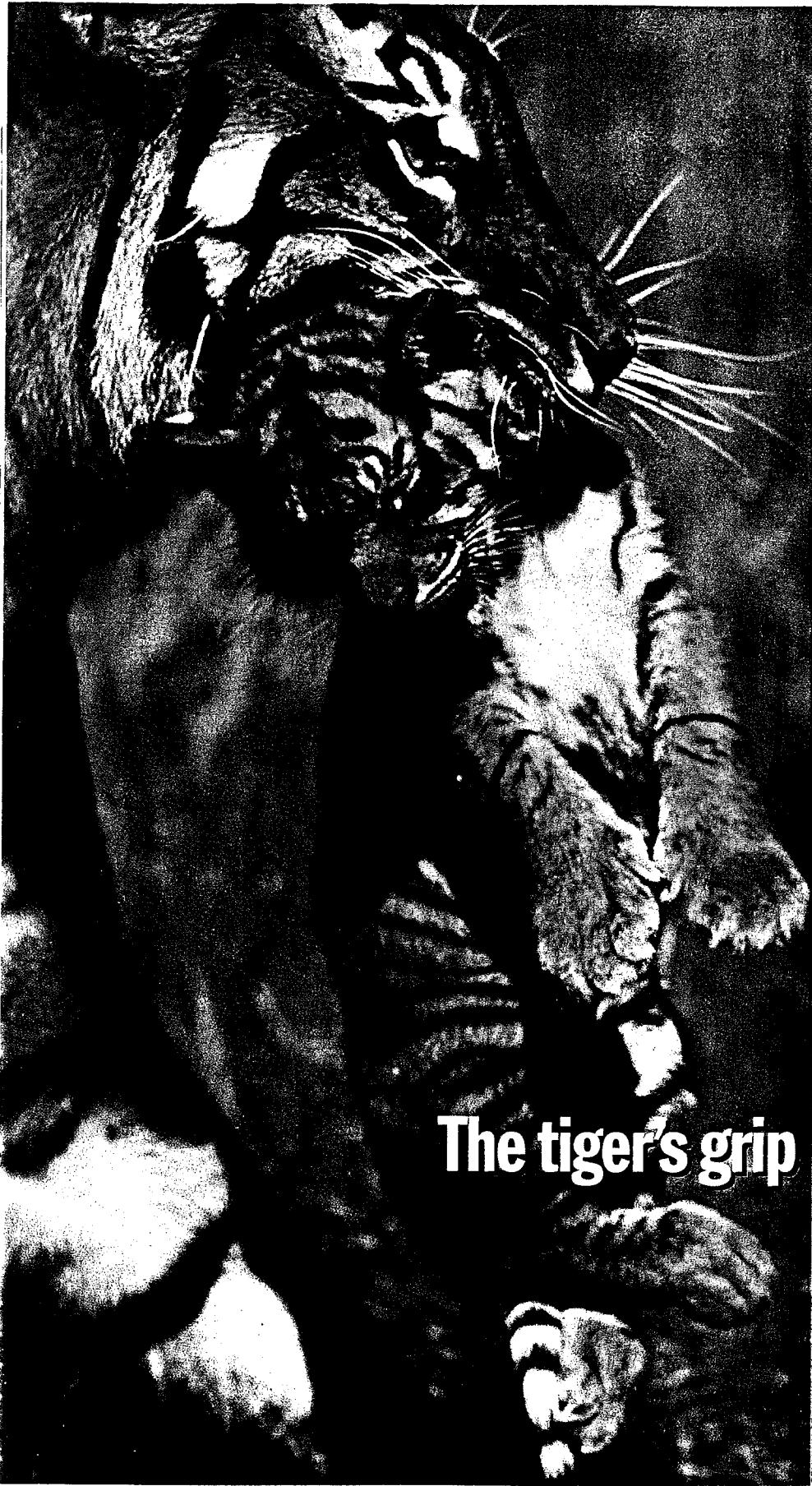


POACHER An Indonesian butchers a freshly killed tiger. Parts such as the forelimb—valued in traditional medicines—can fetch more than \$500 per lb.

BELINDA WRIGHT—DRK PHOTO

THE BRINK





The tiger's grip

FAMILY AFFAIR Mothers teach cubs how to hunt and bring down large animals, skills that zookeepers cannot communicate.

95% in this century. Unless something dramatic is done to reverse the trend, tigers will be seen only in captivity, prowling in zoos or performing in circuses. The wild tigers of old will be gone forever, their glory surviving merely in storybooks, on film—and in dreams.

Preventing such a tragedy is supposed to be the main goal of the governing body of CITES, the Convention on International Trade in Endangered Species, which is meeting in Geneva this week. These biannual sessions usually come and go without attracting much attention, but the plight of the tiger has put a spotlight on the delegates this time around. Last September CITES warned China and Taiwan, two countries where the illicit trade in tiger and rhino parts is prevalent, to take steps to shut down their black markets or face possible trade sanctions. Both nations claim to have curbed the illegal commerce, but environmentalists have gathered evidence to the contrary. Now everyone who is worried about wildlife focuses on one question: Will the nations of CITES follow through on their threat against China and Taiwan?

Whatever the outcome, it may be too late to save the tigers. They once rambled across most of Asia, from Siberia in the north to Indonesia in the south to Turkey in the west. Now they are confined to small, shrinking pockets of their forest habitat. The Caspian subspecies became extinct more than a decade ago. So did the Balinese and Javan cats. The survivors are impossible to count with any precision, but fewer than 650 Sumatran tigers remain and maybe 200 of Siberia's Amur, the world's largest cat. China has a few dozen left, and these isolated individuals will soon die out.

India, with an estimated 60% of the world's tigers, perhaps as many as 3,750, is determined to protect them. But the country's ambitious system of 21 reserves has proved increasingly susceptible to human predators. Over the past five years, the

on the human imagination

parks' tiger populations have dropped 35% on average. In one notorious killing spree between 1989 and 1992, Ranthambore National Park in Rajasthan lost 18 tigers to poachers, even though 60 guards were patrolling the forest.

Ironically, what makes the tiger so vulnerable to humans is its unshakable grip on the human imagination. For millennia, tigers have prowled the minds of mankind as surely as they have trod the steppes and forests of Asia. On the banks of the Amur River in Russia, archaeologists discovered

GERARD LACZ—ANIMALS ANIMALS

6,000-year-old depictions of tigers carved by the Goldis people, who revered the tiger as an ancestor and as god of the wild regions. In Hindu mythology the goddess Durga rides the tiger. And Chang Tao-ling, a patriarch of the Chinese philosophy of Taoism, also mounts a big cat in his quest to fight evil and seek the essence of life. In the English-speaking world nearly every schoolchild who has ever studied poetry is familiar with William Blake's attempt to frame with words the tiger's "fearful symmetry." India's Valmik Thapar, a student of tiger lore, says British and Dutch colonists sometimes killed the beasts in Indonesia and China as a way of asserting their supremacy over local deities.

Now more than ever the tiger's mystique is its ticket to the boneyard. If Asian cultures no longer revere the tiger as a god, many still believe that the animal is the source of healing power. Shamans and practitioners of traditional medicine, especially the Chinese, value almost every part of the cat. They believe that tiger-bone potions cure rheumatism and enhance longevity. Whiskers are thought to contain potent poisons or provide strength; pills made from the eyes purportedly calm convulsions. Affluent Taiwanese with flagging libidos pay as much as \$320 for a bowl of tiger-penis soup, thinking the soup will make them like tigers, which can copulate several times an hour when females are in heat.

A beautiful tiger skin may bring its seller as much as \$15,000, but the bones and other body parts generate even more money, and they are much easier to smuggle and peddle. As incomes rise in Asia, people

tiger's plight reveals the limits of conservation efforts and raises disturbing questions about humanity's ability to share the planet with other animals. Says Elinor Constable, an Assistant Secretary of State who leads U.S. diplomatic efforts to help the tiger: "If the concerted efforts of the world cannot save the tiger, what will that say about our ability to deal with more complex environmental problems?"

ONLY A FEW YEARS AGO, THE tiger was considered a conservation success story. Centuries of legal tiger hunting and forest destruction had raised the specter of extinction, but in 1972 governments rallied to rescue the cats. Taking up the issue as a personal cause, Indian Prime Minister Indira Gandhi launched Project Tiger, which established the coun-

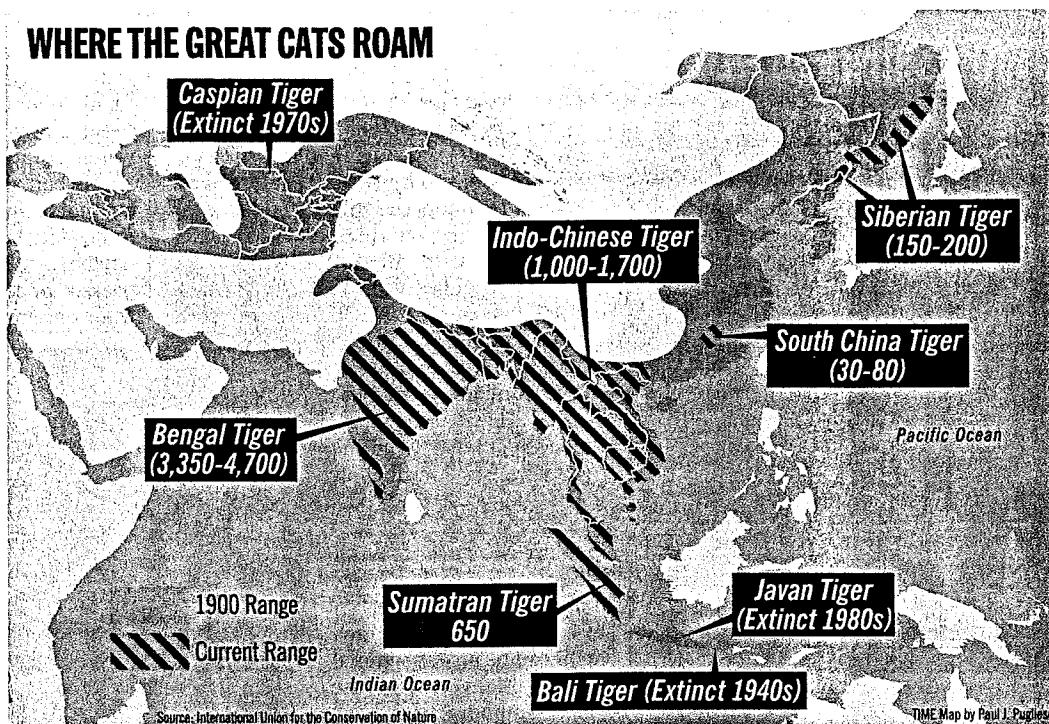
try's network of reserves. Western nations joined with several Asian countries to ban hunting and the trade in skins. By 1980 populations on the subcontinent had recovered to the point where B.R. Koppikar, then director of Project Tiger, could boast to the *New York Times*, "You can say that there is now no danger of extinction of the tiger in India."

The conservation community so desperately wanted to believe in the success story that it ignored signs that all was not well. No government program could stop

the Conservation of Nature, in Geneva, says ruefully, "We should have seen this coming." Only in the late 1980s, he notes, after the Chinese had exhausted their bone stockpiles, did conservationists begin to notice unusual trends in poaching.

Brijendra Singh, a member of India's Tiger Crisis Committee, recalls hearing the first reports in 1986 of poachers being apprehended with bags of tiger bones. Intrigued, Singh and other officials at Corbett National Park set out to exhume tiger carcasses that had been buried in previous

WHERE THE GREAT CATS ROAM



Source: International Union for the Conservation of Nature

Imagination has become its ticket to the boneyard

can afford to pay tens or hundreds of dollars for a dose of tiger-based medicine. And as the destruction of tigers decreases supply, the price of their parts rises further, creating ever greater incentives for poachers to kill the remaining animals.

The forces driving the black market are so strong that nothing—not public opinion, not political pressure, not the power of police—has halted the tiger's slide toward extinction. Can international trade sanctions against Asian nations succeed where all else has failed? There is no guarantee. The

try's network of reserves. Western nations joined with several Asian countries to ban hunting and the trade in skins. By 1980 populations on the subcontinent had recovered to the point where B.R. Koppikar, then director of Project Tiger, could boast to the *New York Times*, "You can say that there is now no danger of extinction of the tiger in India."

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PARTS AND POTIONS

Though few cultures still revere the tiger as a god, many Asians, from Korea to India, believe the animal is a source of healing power



Asians turn tiger penises into soup in hopes of boosting flagging libidos.



A grotesque procession of skulls and bones ends in Taiwanese pharmacies.



Skins and heads often make their way from India to the Middle East.



The cat's essence shows up in stores as wines, powders and balms.

years. The workers discovered that the skeletons had already been removed. Soon reports of poaching for tiger bones began to flood in from all over India.

Only last year, however, did officials realize the scale of the slaughter. A sting operation organized by TRAFFIC, an organization that monitors the wildlife trade for the World Wildlife Fund, uncovered a vast poaching network. In one bust last August, New Delhi police found 850 lbs. of tiger bone (equivalent to 42 tigers) and eight pelts. Sansar Chand, a dealer who surrendered last December, has nearly two dozen wildlife cases pending against him. Given the ease with which traffickers can manipulate India's glacial judicial system—where cases can drag on for decades—arrest is often only an inconvenience.

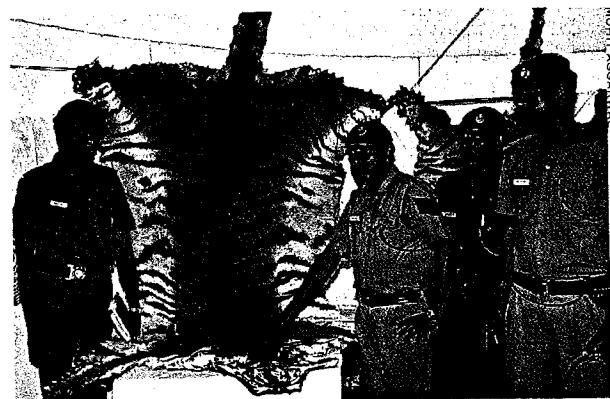
For all the tiger's power, it can be an easy animal to kill. Many cats in the Ranthambhore park have died from poison that villagers sprinkled on animals that the tigers had killed and temporarily left on the ground. Other cats have fallen victim to the hunters of the Mogiya tribes, who pack high-powered rifles and shotguns. Middlemen pay them \$100 to \$300 per animal (a huge amount in an area where an average wage is \$1 a day).

Once killed, many tigers join the corpses of leopards, jackals and other animals in a grotesque procession by cart and truck that leads ultimately to a series of tenements along a narrow, filthy alley in Delhi's Sadar Bazaar. In one cluster of squallid apartments, the TRAFFIC sting operation discovered more than a dozen families engaged in the illicit wildlife trade. There the once magnificent animals are skinned, their prized parts dried and packaged, and their bones cleaned and bleached. The skins travel west, often ending up in the homes of wealthy Arabs, while the bones make their way to the east, frequently on the backs of Tibetans who ferry the contraband across mountainous, sparsely populated terrain to the Chinese border.

Indian conservationists have watched with dismay as this new round of poaching unravels the work of decades. Sanjoy Debroy, a career wildlife officer, says that when he revisits a tiger reserve in Assam that he directed for a dozen years, the demoralized staff members can't talk to him without weeping. Their tigers are hunted by members of the Boro tribe, who are staging a rebellion against the government. They trade tiger parts for guns and ammunition to carry on their insurgency. The

park had an estimated 90 tigers, but Debroy has heard that between 30 and 40 were killed in just four months. "I thought I had done something to restore the tiger," says Debroy, "but now I feel miserable as I watch my life's work go down the drain."

As bad as the situation is in India, it is far worse in eastern Russia's taiga. The Amur tiger that inhabits this 800-mile-long stretch of evergreen forest nearly disappeared once before—during the 1930s, when communist big shots would bag eight



CONTRABAND An extensive cache of remains uncovered in New Delhi made authorities realize the scale of the crisis.

or 10 of the cats during a single hunt. But the state exercised iron control over the region, and when it decided to protect the tigers, their population recovered from roughly 30 to as many as 400 during the mid-1980s. Unfortunately for the Amur, tiger-bone prices began surging in the early 1990s, just when the fall of the Soviet Union led to a breakdown of law and order in the taiga.

THE SUBSEQUENT ECONOMIC chaos has left the local wildlife departments broke and officials susceptible to bribes. Amid this collapse of enforcement, "the poacher owns the taiga," says Steven Galster, who monitors conservation efforts from Vladivostok for Britain's Tiger Trust. Not content with staking out areas frequented by the cats, some hunters stalk the Amur tiger on horseback with the help of dogs.

The losses have been staggering. Last winter, Russian officials estimated that between 80 and 96 tigers were killed, and the poaching continues unabated this year. A new study of tiger-population dynamics led by biologist John Kenney of the University of Minnesota suggests that even moderate poaching makes extinction a virtual certainty once a tiger census drops below 120. Unless the Russian government controls hunting, the Amur tiger will cross that threshold within two or three years.

Market demand drives poaching, and activists such as Sam LaBudde of the Earth Island Institute in San Francisco argue that

the current crisis exposes the shortcomings of old-line conservation efforts. "The failure to address market demand means that tens of millions of dollars invested in past efforts to save the tiger have amounted to little more than a colossal subsidy for the Chinese traditional-medicine market," says LaBudde. Others point out that environmental groups have in fact achieved notable successes by attacking demand. Pressure on the fashion industry in the West, for instance, helped halt precipitous declines in spotted-cat populations during the 1970s, and international condemnation of ivory-consuming nations has granted the elephant at least a temporary reprieve.

Demand for tiger bone, however, originates in China, Korea and Taiwan, largely beyond the reach of Western publicity campaigns. Moreover, tiger-bone remedies are so ingrained in these cultures that it is not certain their governments could control the trade in tiger parts. Whether they have the will to try is even more open to question. All three countries have a well-documented history of paying lip service to agreements protecting endangered species while continuing to do business as usual.

Korea openly imported tiger parts until July 1993, and its customs statistics offer rare insight into the size of the market. An analysis by TRAFFIC International revealed that Korea was importing from 52 to 96 dead tigers a year between 1988 and 1992, even as cat populations were plunging



PREDATOR BECOMES PREY Thousands of cats died during hunts in India, like this one in 1891. Shot by aristocrats often mounted on elephants, the tigers ended up as trophies.

around the world. Imports rose in 1990 and 1991, suggesting that bone dealers were stockpiling parts in anticipation of the trade being shut down. Indeed, fearful of international sanctions, Korea finally joined CITES last year and banned tiger imports. But the country has failed to enforce new laws designed to halt the internal trade in tiger parts.

Taiwan and China have ostensibly accepted CITES' rules for years, but that hasn't helped the tiger. China halted the state-

sponsored production of tiger-bone remedies only in mid-1993. Taiwan has announced a series of measures over the past 15 years banning the use of tiger bone and other products from endangered species, but the actions were annoyances to the dealers rather than serious blows to their business.

In 1989 the London-based Environmental Investigation Agency called on nations to impose sanctions against Taiwan for failing to halt illicit trade in endangered species. EIA investigators offered evidence

A Shotgun, a Promise of \$5 and a Skinned Cat

THE TIGER HUNTER OF YORE WAS A MAHARAJAH OR BRITISH aristocrat who would take potshots at roaring beasts while perched atop an elephant. Celebrated in prints and woodcuts, this blood sport looked manly but carried with it about as much risk as watching a professional football game from a skybox, since the cats wouldn't attack an elephant. Today the typical tiger killer is more like an Indian man named Raju: a diminutive, ragged farmer who does not even own a gun. Nonetheless, as a member of the Jenu Kuruba tribe, Raju knows how to hunt the big cats. In 1993 he downed a tiger in Nagarhole Park with a borrowed shotgun.

The gun's owner, a local landlord named Mahadeswara, had hired Raju to poach deer and other game favored in local feasts. Gun owners often hire tribesmen as shooters because of their knowledge of the forest. One evening last spring, Raju, the landlord and two other poachers hid near a water hole. At dusk a tiger approached within a few yards. Raju claims he was reluctant to shoot it, but the landlord insisted. He promised, but never delivered, payment of 110 lbs. of millet—worth \$5.

Using a shotgun shell loaded with six slugs, Raju fired. So well hidden

were the hunters, Raju says, that he had no fear of the tiger's turning on them if the shot missed. It did not; it hit the animal under its shoulder. Mortally wounded, the great cat tried to run but, after 20 yds., collapsed. The poachers skinned it on the spot.

As news of the tiger kill spread through nearby villages, informants quickly led police to Raju. Mahadeswara hid but was arrested two months later. While Indian justice guarantees neither swift nor sure punishment, tiger specialist Ullas Karanth believes the shame and inconvenience of interminable court proceedings deter villagers, who lack the resources of wildlife traders. Raju says he regrets what he did and hopes to assist with antipoaching patrols.

Unfortunately, tens of thousands of people like Raju live within five miles of the park and its riches. Residing in a relatively prosperous agricultural region, Raju is far better off than India's desperate poor. Even so, temptation led him to supplement his income by poaching other animals for years before he shot the tiger. Says C. Srinivasan, Nagarhole's deputy wildlife warden: "It's like trench warfare. We can never relax."

The unlucky tiger never saw Raju and the other poachers hidden near a water hole.



EUGENE LINDEM



“There may not be an



of the open sale of tiger parts, including skins, and a host of other banned animal products. Since then, illegal wares have disappeared from display shelves, but subsequent investigations by several environmental groups suggest that potions made from tigers, rhinos and other endangered species are still readily available. As recently as this February, an undercover probe sponsored by Earth Trust in four Taiwanese cities found that 13 of 21 pharmacies visited offered tiger-bone medicines.

Renowned biologist George Schaller of New York's Wildlife Conservation Society warns that if the tiger-bone trade is allowed to continue, it will threaten all large cats. Traditional medicine makers also use bones from other endangered felines, such as the snow leopard and golden cat. "If the price keeps going up, the search for bone will start affecting cats in Africa," says Schaller.

The situation is almost a replay of the battle between environmentalists and Asian nations over the ivory trade, which

SIBERIAN TRAGEDY Russian biologists check an ear tag used to identify an Amur tiger, the largest of the big cats. Amid the chaos of the post-Soviet era, poachers killed this female last fall, orphaning four cubs, inset. Two survived and are now at a U.S. zoo.

led to rampant poaching of African elephants during the late 1980s. Fearful that the promises made about tiger parts were as empty as the ones made about ivory, 86 organizations, led by the Earth Island Institute (EIA) and Britain's Tiger Trust, took their case against China and Taiwan to the governing committee of CITES in March 1993. The committee gave the two countries six months to start cracking down on the trade in tiger parts and rhino horn. The deadline had little effect: at a meeting in Brussels last September, CITES declared the measures taken by China and Taiwan to be inadequate and set the stage for trade sanctions to be imposed.

Alarmed at that prospect, the two offending nations have since announced still more steps to curb the tiger-part trade, but they have yet to satisfy their critics. Chinese authorities say that they have assigned 40,000 people to enforce laws aimed at the black market and that more than 1,000 lbs. of confiscated tiger bone have been burned. Conservationists don't trust either claim. China has considered raising tigers in captivity to supply the traditional-medicine market, but that may only legitimize a nasty business. Poachers could pass off the tigers they kill as "captive bred."

The Taiwanese government has trumpeted the creation of a task force on en-

dangered species within the national police. It remains unclear, however, whether the unit has been staffed or even has a budget. Taiwan officials have variously said the unit will have 300, 45 and six officers. So far, the Taiwanese have not made a single arrest, and response to a government call for people to come forward and register tiger parts and rhino horn has been embarrassingly small. Allan Thornton of the EIA says past efforts to enforce the law consisted of uniformed police asking pharmacies whether they had tiger bone—something like having cops ask drug dealers whether they are carrying heroin.

TAIWAN DEFENDS ITSELF VIGOROUSLY. Ling Shiang-nung, vice chairman of the Council of Agriculture, questions both the sincerity and accuracy of international environmental groups that argue that tiger parts are still widely available. "We feel so disappointed that we are doing so much and getting so little credit for it," says Ling. Ginette Henley of traffic usa admits that the Taiwanese have taken steps but fears that Taiwan and China will do just enough to stave off sanctions and then allow the markets to resume business.

The issue will come to a head at this

week's CITES meeting in Geneva, as delegates debate whether enough has been done in recent months to slow the tiger trade. Since CITES has no enforcement powers of its own, only individual member nations can make the decision to impose trade sanctions. A key player to watch is the U.S., largely because of the strong stand taken by Interior Secretary Bruce Babbitt. An ardent environmentalist, he attended

mitment to free trade. A State Department official suggests that it's too soon for the U.S. to play its last card. "Once you impose sanctions," he asks, "what do you do then?"

Environmentalists respond that if the U.S. fails to act, the tiger will almost surely disappear in the wild. Noting that Taiwan and China have "been tried and convicted by CITES and the U.S." Earth Island's LaBudde says, "A judgment of guilty with

other conservationists dismiss this approach as both inefficient and unrealistic. Tigers learn from their mothers subtle details about hunting that would be difficult for human mentors to teach. And once tigers have disappeared from an area, Schaller notes, it becomes extremely difficult to convince villagers that they should welcome the animals back. "It would cost millions to breed and reintroduce tigers,"

—BRUCE BABBITT,
INTERIOR SECRETARY

the Brussels meeting in September and played a major role in the effort to put pressure on China and Taiwan.

In particular, Babbitt announced a determination by the Clinton Administration that these countries were in violation of the so-called Pelly amendment, a once obscure section of the U.S. Fishermen's Protective Act that has the potential to become the world's most powerful piece of environmental legislation. It authorizes the use of trade sanctions against nations whose actions hurt endangered species. Just the threat of Pelly penalties a few years ago caused Japan to reduce the use of drift nets by its fishing boats and prompted Korea to join CITES.

This time the Clinton Administration in effect told China and Taiwan to clean up their act or face sanctions, and a March deadline was set. On the eve of the Geneva sessions, Babbitt remained firm. "All the CITES members will be taking signals from this meeting," said the Interior Secretary. "There may not be another chance to save the tiger."

According to Administration sources, the U.S. will encourage delegates to renew their September call to action. This would provide President Clinton with the diplomatic cover for imposing sanctions. Before he takes that step, though, Clinton advisers expect to encounter opposition from within the Administration, as concern for the tiger collides with a host of other issues that entangle the U.S., China and Taiwan.

For instance, having chosen not to impose sanctions on China for its persistent violations of human rights, ranging from its treatment of Tibet to the torture and imprisonment of political dissidents, the Administration may find it hard to explain why it is acting now because of environmental wrongs. And at a time when the U.S. is trying to lower trade barriers, some members of the Administration argue that punitive sanctions against China or Taiwan will send the wrong message about U.S. com-

no penalty imposed hardly represents any deterrent." Thornton of the EIA agrees: "It is time for us to make it plain that we are not going to stand by and watch the last tiger disappear."

But the remedy is not that simple. Even if international pressure eliminated poaching, the tiger would still be in trouble. Its habitat is shrinking, and its food supply is dwindling as the territory claimed by humans inexorably expands. Can people be comfortable living in close proximity to hungry predators who on occasion eat humans? Says Geoffrey Ward, author of *The Tiger-Wallahs*: "Poaching is murder, but crowding is slow strangulation."

Given the pressures on habitat, some zoologists maintain that captive breeding of tigers and their eventual reintroduction into the wild should be pursued as a way to keep the species alive. Schaller and many

says the biologist. "If Asian nations want tigers, they can have them far more cheaply by protecting the remaining wild tigers."

Oddly, the Siberian tiger—a critically endangered subspecies—may have the best chance of survival, but only if poaching is controlled. "The Amur tiger has 800 miles of unbroken habitat to move through," says Howard Quigley, who is co-director of the Siberian Tiger Project, a Russian-American conservation effort, "but unless poaching is stopped, there will be no tigers to move through it." The Tiger Trust and the World Wildlife Fund offered vehicles, training and supplemental pay for Russian wildlife rangers, but the killing of tigers continued as those proposals languished for months on the desks of bureaucrats in Moscow. Only last week did the first, unarmed patrol go out.

For the majority of tigers, India is where the battle for survival will be won or lost. It is not the best place to make a stand, given the extreme pressures of human population growth. Says Kamal Nath, the country's Environment Minister: "The threat to the tiger has never been so strong or so real." On the other hand, India has invested \$30 million during the 20 years of Project Tiger and has a culture in which many people still genuinely respect nature. Here is where the world will see if humans and tigers can live side by side.

The two species have coexisted for hundreds of thousands of years. Up until now, the big cat has always been extraordinarily adaptable and resilient. "All a tiger needs," says Schaller, "is a little bit of cover, some water and some prey." But the tiger has finally run afoul of mankind, an evolutionary classmate that has proved to be an even more resourceful killer. "What will it say about the human race if we let the tiger go extinct?" asks TRAFFIC's Ashok Kumar. "What can we save? Can we save ourselves?" —With reporting by Anita Pratap/New Delhi, with other bureaus



BEHIND BARS More tigers may now live in captivity than in the wild. Soon the regal cat may only prowl zoos and dreams.